



## ***WHAT'S HAPPENING?***

***September 2008***

### **Upcoming Seminars**

**Don't forget to  
RSVP if you are  
attending**

#### **NSW:**

**Wednesday October 22**

**Updating the Requirements for Underground Petroleum Storage Systems and Vapour Recovery Stage 2**

#### **Queensland:**

**Thursday November 13**

**ADG7 an Update**

All Members have received flyers for these Seminars. They are also downloadable from the AIDGC website. If you, or your Guests, are attending, don't forget to R.S.V.P. [robynhogan@unwired.com.au](mailto:robynhogan@unwired.com.au)

### **Annual Conference**

#### **“Learning from Experience”**

The Conference Papers will be downloadable from the Members' Only pages on the AIDGC website shortly. You will be advised when they are available.

### **PAYPAL**

Many Members have asked AIDGC for Credit Card facilities and now a PAYPAL account has been established.

If you wish to pay by Credit Card – Mastercard or Visa (not AMEX) – contact our Treasurer, Chris. Flannery, [lcf@alwaysonline.net.au](mailto:lcf@alwaysonline.net.au) and he will arrange for you to receive an email from PAYPAL requesting the required payment.

You can then submit your Credit Card details to PAYPAL by internet and these monies are then deposited into the AIDGC account.

PAYPAL does charge a handling fee of less than 2.5%, depending on the number of transactions received each month. You are asked to pay this processing fee.

## Corporate Members

Our Corporate Members provide a range of products and services to the Dangerous Goods Industry. Their contact details are:

AJM Environmental –  
Adrian Minshull  
02) 9542 2366

Basset Consulting  
Engineers –  
Tim Dean  
(07) 3510 4000 or  
0439 371 063

Leighton O'Brien  
MassTech –  
Darrell Barton  
03) 9813 5122

Store-Safe Pty Ltd –  
Grant Breeze  
02) 9569 2122

Vanguard Solutions  
Tony Davies  
08) 9420 5322

## MHF Amendment Regulation

A further major hazard facilities (MHF) amendment regulation was published in the NSW Government Gazette on 29 August 2008 and commenced on 2 September 2008. This regulation made changes to the NSW Occupational Health and Safety Regulation (OHS Regulation).

The main object of this amendment regulation is to make it clear that Chapter 6B does not apply to mining workplaces and coal workplaces, following other changes to the OHS Regulation by a separate amendment relating to mining workplaces and coal workplaces.

The NSW Government Gazette is available at  
<http://www.advertising.nswp.commerce.nsw.gov.au/Gazette/Gazette.htm>

To access the current OHS Regulation with all amendments, go to  
[www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au)

if you have any inquiries, please contact the MHF Team at WorkCover NSW:  
Phone: 02 8281 6303 Fax: 02 9271 6303  
Email: [jan.douglas@workcover.nsw.gov.au](mailto:jan.douglas@workcover.nsw.gov.au)

## RESOURCES

Static Electricity Refresher

[http://www.iapa.ca/pdf/2004\\_feb\\_Static%20Electricity.pdf](http://www.iapa.ca/pdf/2004_feb_Static%20Electricity.pdf)

Static hazards using flexible intermediate bulk containers for powder handling

[http://www.crohmiq.com/TechRD/LBritton\\_Static\\_Hazards.pdf](http://www.crohmiq.com/TechRD/LBritton_Static_Hazards.pdf)

Electrostatic ignition hazards arising from fuel flow in plastic pipelines

[http://eprints.ecs.soton.ac.uk/9215/1/JLossPrev\\_15\\_\(2002\)\\_105-109.pdf](http://eprints.ecs.soton.ac.uk/9215/1/JLossPrev_15_(2002)_105-109.pdf)

Spray painting guide

[http://www.deir.qld.gov.au/pdf/whs/spraypaint\\_guide2000.pdf](http://www.deir.qld.gov.au/pdf/whs/spraypaint_guide2000.pdf)

## Safety is No Accident

### Confined Spaces – Awareness and Training

A series of videos on identification, testing of and rescue from confined spaces:

<http://www2.worksafebc.com/Publications/Multimedia/Videos.asp?ReportID=35168>

<http://www2.worksafebc.com/Publications/Multimedia/Videos.asp?ReportID=35169>

<http://www2.worksafebc.com/Publications/Multimedia/Videos.asp?ReportID=35170>

### WorkSafe Victoria Code for Confined Spaces

This Code covers hazard identification and risk controls associated with workplace confined spaces applicable to employers and designers and manufacturers of plant - dated 19 September 2008.

<http://www.worksafe.vic.gov.au/wps/wcm/resources/file/eba1e1472a5fe88/Confined%20spaces%20CC.pdf>

## **CASE STUDIES**

### **Fire Arising from Filling IBCs with Solvent**



This month, my thanks go to John Baker, Peter Hunt, Chris. Flannery and Rick Hall for their contributions.

**A static spark was attributed to the ignition of flammable vapour (ethyl acetate) during liquid filling of a portable tank (IBC) at a Des Moines chemical distribution facility. The fire destroyed a warehouse and interrupted the related business.**

**One employee received minor injuries and a fire fighter was treated for a heat-related illness. A large plume of smoke and rocketing drums and debris triggered an evacuation of businesses which surrounded the facility.**

**The investigation found that the nozzle and hose were not suitable for use in transferring flammable liquids.**

**Furthermore, it was found that steel parts of the plastic fill nozzle and hose assembly were not bonded and grounded. Static electricity was thought likely to have accumulated on these parts and sparked to the stainless steel IBC body, igniting the vapour that accumulated around its fill point.**

**The report notes that static electricity is generated as liquid flows through pipes, valves and filters during such transfer operations. Metal parts and equipment must be electrically wired to each other, known as bonding, and then electrically connected to the earth, known as grounding.**

**In this case, all the conductive metal objects in the nozzle and hose and the steel weight which was suspended from the handle by a wire, were all isolated from ground and were susceptible to static electricity accumulation and discharge.**

## Study Grants

Don't forget that applications for grants close on September 30.

If you are interested, download the application form from the AIDGC Website, complete it and send to PO Box 624, Gladesville, 2111 ASAP.

Enquiries to Terry Grainger 0408677982

The packaging area - where the fire started - had no automatic sprinkler system and was joined to a flammable liquids storage warehouse.

The investigation found the wall separating the two areas was not fire-rated.

As a result, the warehouse was rapidly consumed and although it had an automatic sprinkler system, it was incapable of extinguishing the large blaze.

### **Key Lessons for the Safe Handling and Storage of Flammable Liquids:**

- Ensure that equipment such as fill nozzles and hoses are designed for flammable liquid service and are effectively bonded and grounded.
- Use dip pipes when top-filling portable tanks – to avoid splash filling which is likely to promote generation of flammable vapours, aerosols and mists.
- Install fire suppression systems in flammable liquids packaging areas.
- Separate flammable packaging areas from bulk storage areas.

[http://www.csb.gov/completed\\_investigations/docs/Barton%20Case%20Study%20-%209.18.2008.pdf](http://www.csb.gov/completed_investigations/docs/Barton%20Case%20Study%20-%209.18.2008.pdf)

### **Safe Hot Work Practices**



This case study describes a fatal explosion in a rural oil production field.

Three contractor workers died and a fourth was seriously injured.

The explosion occurred when flammable vapor inside two tanks was ignited by welding activities on a nearby tank.

### **Final Investigation Report**

[http://www.csb.gov/completed\\_investigations/docs/PartridgeRaleighCaseStudyFINAL.pdf](http://www.csb.gov/completed_investigations/docs/PartridgeRaleighCaseStudyFINAL.pdf)

### **Safety Training Video**

<http://events.powerstream.net/002/00174/player/start.asp?mediaformat=&bitrates=&bitratetxt=&mediahost=&w=&h=&clip=&contID=DeathInTheOilField&bypass=>

## **In the News**

### **Vandals Cause Chemical Spill at Wool Processing Plant**



Vandals opened and smashed valves on a number of chemical tanks at one of Australia's largest wool processing plants.

Thousands of litres of hydrogen peroxide and sulphuric acid were amongst spilled chemicals which led to the evacuation of workers and nearby residents.

Police established an 800 metre exclusion zone around the factory amidst fears of an explosion.

[http://www.weeklytimesnow.com.au/article/2008/09/15/6375\\_latest-news.html](http://www.weeklytimesnow.com.au/article/2008/09/15/6375_latest-news.html)

## **IN THE FACTORY**

### **Fixed Sprinkler Systems**

Fixed sprinklers in electrical switch rooms.

[http://www.usfa.dhs.gov/downloads/pdf/coffee-break/cb\\_2008\\_36.pdf](http://www.usfa.dhs.gov/downloads/pdf/coffee-break/cb_2008_36.pdf)

Positioning sprinklers away from potential obstructions to the water discharge pattern.

[http://www.usfa.dhs.gov/downloads/pdf/coffee-break/cb\\_2008\\_38.pdf](http://www.usfa.dhs.gov/downloads/pdf/coffee-break/cb_2008_38.pdf)

## **STANDARDS WATCH**

### **AS 4326:2008: The Storage and Handling of Oxidizing Agents**

This revision was published on 29 August 2008, superseding AS 4326:1995.

<http://www.saiglobal.com/shop/Script/Details.asp?DocN=AS0733788653AT>

### **Keep In Touch**

If you have any suggestions or queries please do not hesitate to contact the AIDGC Executive Officer, Robyn Hogan: [robynhogan@unwired.com.au](mailto:robynhogan@unwired.com.au) or leave a message with the AIDGC paging service 02 9430 6739 and I will return your call.

Any internet links that you would like to share with members, please first send to [jdbaker@ozemail.com.au](mailto:jdbaker@ozemail.com.au)



## Waikato Cool Store Fire Report Calls for Overhaul of Regulations and Standards



A Fire Service inquiry into a fatal explosion and fire at a cool store is calling for an overhaul of regulations and standards.

The Department of Labour identified the refrigerant gas that exploded as highly flammable propane.

In attending the blaze, one fireman was killed and another seven were seriously injured.

The report found there was no evidence of:

- warning signs of hazardous materials
- use of a gas odorant
- a risk assessment plan
- compliant fire detection or protection systems and adequate firefighting water

The report identified nine factors which might have prevented the tragic outcome:

- Having hazardous substances regulations applied fully at the installation
- Prior notification to the Fire Service that hazardous substances were present
- Receipt of an application for approval of an evacuation scheme
- A familiarization visit by local Fire Service staff
- Fire Service awareness of the large scale use of flammable refrigerants in NZ
- Warning signs at the cool store
- Smell added to refrigerant gas, so firefighters would know of its presence
- Gas detectors to warn fire crews
- Fire crews to use a portable gas detector

The report suggested a fundamental cause of the incident may lie in part in systemic defects in the regulatory environment and the communication between regulatory agencies.

<http://www.3news.co.nz/Video/National/tabid/309/articleID/72771/cat/64/Default.aspx#video>  
[http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10533690&pnum=0](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10533690&pnum=0)

### ADG7 – New Terminology or Meanings: No 4

This is the fourth in our series of explanations of the difference in terminology or meaning between ADG6 and ADG7.

## **Environmentally Hazardous Substances in ADG7**

### **ADG6 provisions**

While ADG6 included the entries:

- UN 3077 Environmentally Hazardous Substance, Solid, N.O.S.; and
- UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S.,

it provided no criteria by which substances could be assigned to these entries. While some substances were listed in Appendix 8, SP 179 indicated that substances would be designated by the Competent Authority.

Few, if any, substances were so designated for transport in Australia.

### **ADG7 provisions**

Chapter 2.9 of ADG7 reproduces in full that chapter of UN15 and provides detailed criteria for the assignment of substances to Class 9 and those two UN Numbers. This will have the impact of substantially increasing the number of substances that are classifiable as dangerous goods of Class 9.

ADG7 SP 179 specifies:

“This designation must be used for substances and mixtures which are dangerous to the aquatic environment or which are marine pollutants that do not meet the classification criteria of any other Class or another substance within Class 9.

This designation may also be used:

- for wastes not otherwise subject to this Code but which are covered under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and
- for substances designated to be environmentally hazardous substances by the competent authority of the country or state of origin, transit or destination which do not meet the criteria for an environmentally hazardous substance according to this Code or for any other hazard Class.”

It is recognized, however, that the criteria are heavily weighted towards toxicity in an aquatic environment which is particularly relevant to transport by sea and to transport by rivers and canals as is common in many parts of Europe. Many of the materials that will now be classified are widely used as herbicides where low concentrations pose little if any land pollution concerns.

As a result, like USA, Australia has introduced a local special provision in ADG7, AU01, which specifies:

“Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

(a) packagings;

(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).”

Note that this does not apply to sea or air transport within Australia or to any form of international transport.

## **UK HSE Safety Alert Liquid Nitrogen**

<http://www.hse.gov.uk/chemicals/cryogenicalert.htm?ebul=hsegen/22-sep-2008&cr=12>